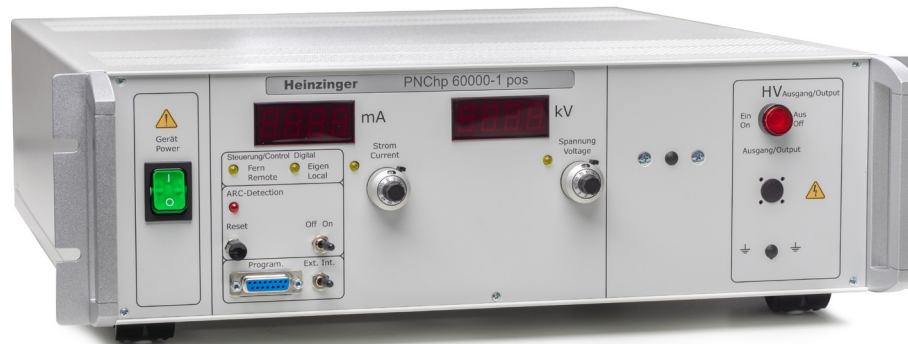


PNChp HIGH PRECISION POWER SUPPLY

Output Voltage up to 300,000 Volts



Universal High Precision HV Power Supplies up to 300,000 Volts

Ultra High Precision and voltages for numerous applications

The high-precision power supplies of the PNChp series achieve a ripple and stability of <math><0.001\%</math> in voltage stabilization thanks to constructive measures, optimized circuits and careful selection of high-precision components.

Our long experience and our wide know-how in design and construction help us to achieve the best long-term stability of the PNChp series.

Already in the standard version the PNChp types offer a ripple and stability in the range of <math><0.001\%</math> in the voltage stabilization, in addition with a low temperature coefficient and an outstanding long-term stability.

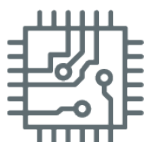
Especially with the highest quality requirements in manufacturing, the PNChp meets customer needs and is not only used for simple applications, but also for demanding development and research tasks in various technology and research areas, as well as for precise work in the semiconductor industry.

The Heinzinger PNChp Series is available for most of the PNC Series, ensuring consistent high accuracy regardless of the power supply power rating.

PNChp-Series Highlights

- Low residual ripple of 10 ppm and excellent long term stability
- Continuous short circuit proof
- Reverse voltage proof
- HV on/off via push button or interface
- Output power up to 2,000 W
- Setting of the output values through 10-turn potentiometers, separately for voltage and current
- Remotely controllable and extendable by means of the integrated analog interface 0...10 V.

Typical Applications



Semiconductor tests / manufacturing



HV tests



Quality tests



Mass Spectrometer detectors



Accelerators (kickers, detectors)

PNChp HIGH PRECISION POWER SUPPLY

Technical Data

General

Function	switch mode power supply
Input voltage	1-phase units: 230 V \pm 10 % other on request
Input frequency	47 ... 63 Hz
Input current	type-dependent
Ambient temp.	0 °C ... 40 °C

Displays

Output voltage	3.5-digit digital display
Output current	3.5-digit digital display
Voltage control (CV-mode)	LED
Current control (CC-mode)	LED
HV-ON	signal lamp

Output

Discharge time (without load)	<60 s (type-dependent)
Output voltage	positive or negative (reversal polarity as option) connected to earth
Output socket	Heinzinger HV-socket, passed through to the output voltage

Analog Interface for remote control

Voltage adjustment	0...10 V
Current adjustment	0...10 V
Voltage monitor	0...10 V
Current monitor	0...10 V
Output on/off	contact NO = on
Connector	15-pin Sub-D- socket

Enclosure

Universal enclosure for use as 19"-rack-mount or as benchtop (12U units as 19"-rack).
Width 19" (443 mm), height & depth type dependent.

Voltage stabilization

Setting range	approx. 0.5 % to 100 % U_{nom}
Setting accuracy (manual operation)	\leq 0.02 % U_{nom}
Line regulation (at \pm 10% mains voltage change)	\leq \pm 0.01 % U_{nom}
Load regulation (on load step from 0 to 100%)	\leq 0.05 % U_{nom}
Response time (on load current change from deviation 0 to 100%)	<5 ms to 0.1 % U_{nom} deviation
Stability (under constant conditions)	\leq 0.001 % U_{nom} over 8 h
Temperature coefficient	\leq 0.001 % U_{nom} /K
Ripple	\leq 0.001 % pp U_{nom} \pm 50 mV

Current stabilization

Setting range	approx. 0.5 % to 100 % I_{nom}
Setting accuracy (manual operation)	\leq 0.02 % I_{nom}
Line regulation (at \pm 10% mains voltage change)	\leq \pm 0.01 % I_{nom}
Load regulation (on output voltage change of around \pm 10% due to load change)	<0.1 % I_{nom}
Response time (on output voltage change of around \pm 10% due to load change)	<5 ms
Stability (under constant conditions)	\leq 0.05 % I_{nom} over 8 h
Temperature coefficient:	\leq 0.01 % I_{nom} /K
Ripple	\leq 0.02 % pp I_{nom} \pm 500 μ A

Scope of supply

- Heinzinger PNChp unit according to type description
- Heinzinger HV-cable with HV-connector, length 3 m
- Power cable 1.5 m, with connector (CEE7)
- Plug for analog interface

Accessories / Options:

- Option 01, all outputs on the rear side (system >35 kV always ave outputs on the rear side)
- Option 02, interlock connection
- Option 04, 4 1/2-digit digital displays
- Option 10, DC isolation of the analog interface
- Option 22, coarse/fine setup control
- Option 46, Ramp control
- Option 52, rapid discharge circuit
- Option 56, ARC detection with power cut
- Option 57, setting of voltage and current limits
- Option 60, polarity inversion of the output voltage
- Option 61, electrical polarity reversion
- Option 76, digital 16-bit interface
- Option 95, Calibration Certificate

Product Summary PNChp

Type	Voltage (V DC)	Current (mA)	Power (W)	Height (U)	Rack Depth (mm)	Weight (kg)
PNChp 600 - 100	0 ... 600	0 ... 100	60	3	500	7
PNChp 600 - 300		0 ... 300	180	3	500	7
PNChp 600 - 1000		0 ... 1,000	600	3	540	10
PNChp 600 - 2000		0 ... 2,000	1,200	4	585	15
PNChp 600 - 3000		0 ... 3,000	1,800	4	585	20
PNChp 1500 - 40	0 ... 1,500	0 ... 40	60	3	500	8
PNChp 1500 - 100		0 ... 100	150	3	500	8
PNChp 1500 - 400		0 ... 400	600	3	540	10
PNChp 1500 - 800		0 ... 800	1,200	4	585	15
PNChp 1500 - 1200		0 ... 1,200	1,800	4	585	20
PNChp 3500 - 20	0 ... 3,500	0 ... 20	70	3	500	6
PNChp 3500 - 50		0 ... 50	175	3	500	7
PNChp 3500 - 200		0 ... 200	700	3	585	12
PNChp 3500 - 300		0 ... 300	1,050	4	585	15
PNChp 3500 - 500		0 ... 500	1,750	4	585	20
PNChp 6000 - 10	0 ... 6,000	0 ... 10	60	3	500	7
PNChp 6000 - 30		0 ... 30	180	3	500	8
PNChp 6000 - 100		0 ... 100	600	3	540	10
PNChp 6000 - 200		0 ... 200	1,200	4	585	15
PNChp 6000 - 300		0 ... 300	1,800	4	585	20
PNChp 10000 - 6	0 ... 10,000	0 ... 6	60	3	500	7
PNChp 10000 - 20		0 ... 20	200	3	500	8
PNChp 10000 - 60		0 ... 60	600	3	540	12
PNChp 10000 - 120		0 ... 120	1,200	4	585	18
PNChp 10000 - 200		0 ... 200	2,000	4	585	22
PNChp 20000 - 3	0 ... 20,000	0 ... 3	60	3	500	10
PNChp 20000 - 10		0 ... 10	200	3	500	16
PNChp 20000 - 30		0 ... 30	600	3	540	18
PNChp 20000 - 60		0 ... 60	1,200	4	585	25
PNChp 20000 - 100		0 ... 100	2,000	4	585	32
PNChp 30000 - 2	0 ... 30,000	0 ... 2	60	3	500	12
PNChp 30000 - 5		0 ... 5	150	3	500	18
PNChp 30000 - 20		0 ... 20	600	3	540	18
PNChp 30000 - 40		0 ... 40	1,200	4	585	25
PNChp 30000 - 60		0 ... 60	1,800	4	585	32
PNChp 40000 - 1	0 ... 40,000	0 ... 1	40	3	500	15
PNChp 40000 - 5		0 ... 5	200	3	500	15
PNChp 40000 - 15		0 ... 15	600	4	540	30
PNChp 40000 - 30		0 ... 30	1,200	6	585	45
PNChp 40000 - 50		0 ... 50	2,000	6	585	53
PNChp 60000 - 1	0 ... 60,000	0 ... 1	60	3	500	22
PNChp 60000 - 3		0 ... 3	180	3	500	22
PNChp 60000 - 10		0 ... 10	600	6	620	49
PNChp 60000 - 20		0 ... 20	1,200	6	620	50
PNChp 60000 - 30		0 ... 30	1,800	6	620	58
PNChp 100000 - 1	0 ... 100,000	0 ... 1	100	6	580	50
PNChp 100000 - 3		0 ... 3	300	9	620	50
PNChp 100000 - 6		0 ... 6	600	9	620	70
PNChp 100000 - 10		0 ... 10	1,000	12*	700	95
PNChp 100000 - 20		0 ... 20	2,000	12*	700	105
PNChp 150000 - 1	0 ... 150,000	0 ... 1	150	12*	700	110
PNChp 150000 - 1,5		0 ... 1.5	225	12*	700	125
PNChp 200000 - 1	0 ... 200,000	0 ... 1	200	23*	800	230
PNChp 200000 - 1,5		0 ... 1.5	300	23*	800	230
PNChp 250000 - 1	0 ... 250,000	0 ... 1	250	37*	800	300
PNChp 300000 -1	0 ... 300,000	0 ... 1	300	37*	800	400

*12/23/37 U-systems are supplied in cabinets, height 600/1300/2000 mm
1U = 44.45 mm

Different voltage- or current combinations are available on request.

Dimensions and weights are approximations and may vary depending on the version configurations

Other High Voltage Power Supplies

EVO – The new generation of high voltage power supplies



The EVO series supplies your application with constant and reliable high voltage. Both state-of-the-art technology and software have been developed for these units for intuitive operation and protection for the high-voltage power supply, test equipment and personal.

Features

- DC voltage classes: 1.5 kV / 5 kV / 10 kV
- Precision: 0.01 %
- Reversible polarity, positive or negative
- Output power: 2 kW or 3 kW
- Output current up to 2,000 mA
- Wide range AC input, singlephase
- Ethernet and RS232 interfaces on board
- Comprehensive protective functions, e.g. OVP & OCP
- Interlock contacts as standard
- For worldwide use, compliant with CSA, UL & CE
- Innovative operating concept & HMI



PNC



The high-precision power supplies of the PNChp series achieve a ripple and stability of <math><0.001\%</math> in voltage stabilization thanks to special design features and optimized circuits.

Features

- Voltages up to 300,000 V
- Low residual ripple and excellent long term stability up to 0.01 %
- Output power up to 2,000 Watts
- Continuous short circuit proof
- Reverse voltage proof



PNC3p



The PNC3p is designed for high performance and sophisticated applications and is available with an output power up to 6 kW.

Features

- Low residual ripple and excellent long term stability
- Output power up to 6,000 Watts
- Continuous short circuit proof
- Reverse voltage proof
- HV on/off via push button or interface



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